Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS AND RESPONSE TO COMMENTS

Title V Proposed Permit Renewal No. V-03-017
LOGAN ALUMINUM, INC.
RUSSELVILLE, KENTUCKY
June 17, 2003
WILSON TAN, REVIEWER
Plant I.D. # 21-141-00038
Application Log # 55244

EXECUTIVE SUMMARY

Logan Aluminum has applied to the Kentucky Division for Air Quality for a construction/operating Title V renewal permit for an aluminum rolling mill source located in Russellville. The plant produces rolled aluminum from scrap aluminum. Scrap aluminum is charged into two natural gas fired melt furnaces. The molten aluminum will go to holding furnaces to get purified, before it gets cast into ingots. The aluminum ingots get heated in car bottoms and pusher furnaces before they go to the rolling mills. Most of the rolled aluminum passes through a pretreatment and coating line before it gets shipped to customers. The plant is a Title V source because potential emissions of hazardous air pollutants (HAPs) and criteria air pollutants exceed the major source threshold.

A preliminary determination was made to approve the permit and a public notice was placed in the News Democrat & Leader on May 16, 2003. The comment period expired on June 14, 2003 and no comments were received from the public, affected states, or EPA. Comments were received from the company. This permit is the proposed permit under the Title V program and shall become the final Title V permit unless EPA files an objection.

In conclusion, a thorough analysis has been made of all relevant information available which pertains to this application. The Division has concluded that the source will comply with all applicable air quality regulations and requirements. Compliance with the terms of the permit will ensure compliance with all air quality requirements. Therefore, it is The Division's final determination that a Title V permit should be issued as conditioned.

Response to Comments:

Company Comment:
Since we have an automatic lime feed detector is it necessary to look at the lime feed system every day because we get an alarm if no lime is flowing (swarf monitoring page 12 (f) and flux box monitoring page 4 (g)).

Response:
The Division concurs and has changed the visual inspection to monthly.

Comment:
On page 22 for the DC2 holder, we have a particulate emission rate of .8 lbs per ton of feed. The same is on DC3 Holder pg 30. DC1 holder has a particulate rate of .4 lbs per ton of feed on page 14. I believe the .4 lbs per ton is the correct rate for the holders by the MACT standard.

Response:
The Division concurs and has made the changes in the permit.

Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V Draft Permit Renewal No. V-03-017
LOGAN ALUMINUM, INC.
RUSSELVILLE, KENTUCKY
May 1, 2003
WILSON TAN, REVIEWER
Plant I.D. # 21-141-00038
Application Log # 55244

SOURCE DESCRIPTION:

Logan Aluminum, Inc., an existing Title V major source submitted a permit renewal application to its existing V-97-034 (Revision 2) permit.

Logan Aluminum is an aluminum rolling mill source located in Russellville. The plant produces rolled aluminum from scrap aluminum. Scrap aluminum is charged into two natural gas fired melt furnaces. The molten aluminum will go to holding furnaces to get purified, before it gets cast into ingots. The aluminum ingots get heated in carbottoms and pusher furnaces before they go to the rolling mills. Most of the rolled aluminum passes through a pretreatment and coating line before it gets shipped to customers.

In this permit renewal, the construction projects did not trigger PSD because they are individual projects and were submitted at different times. Due to the timeframe for renewal, all

construction projects were put with the renewal.

COMMENTS:

Permit renewal incorporated a few changes:

A. Emission Point 22(1001-1) – Flux Box:

(i) Logan Aluminum has installed a new MACT compliance flux box baghouse.

(ii) Induction furnace in this emission point will be separated and a new emission point has been assigned [emission point 50(1111-1)]

(iii) In addition to the requirements stated in the old permit V-97-034 (Revision2), applicable requirements from 40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production (MACT) have been incorporated. The Flux box is subject to MACT.

Operating Requirements:

a. Emission capture and collection system:
- Design and install in accordance with industrial Ventilation: A hand-book of Recommended Practice; operate in accordance with Operation, maintenance, and monitoring plan (OM&M plan).

b. Aluminum output:
- Maintain a log that records the weight of aluminum outputs. Operate in accordance with OM&M plan.

c. Labeling:
- A diagram of the unit(s) subject to 40 CFR 63 Subpart RRR has to be developed and labeled with the required information. The information will be stored in Logan Aluminum database and can be retrieved at any computer in the plant. Each workstation shall have the computer capabilities.

d. Bag leak detector:
- Initiate corrective action with 1-hr alarm and complete in accordance with the OM&M plan; operate such that alarm does not sound more than 5% of operating time in 6-month period.

e. Lime injection rate:
- Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection system; maintain feeder setting at level established during the performance test for continuous injection systems.

f. Reactive flux injection rate:
- Maintain reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.

Emissions Limitations:

- Particulate Matter emissions from flux boxes shall not exceed 0.01 lbs/ton of feed
- Hydrochloric Acid (HCl) emissions from flux boxes shall not exceed 0.04 lbs/ton of feed.
- If the individual limits above is not met, Logan Aluminum shall meet the SAPU limit.

Compliance Demonstration:

a. Particulate emission rate (lbs/hour) = [Monthly production rate x Emission factor

listed in Kentucky EIS/ (Hours of operation per month)] x [100 - baghouse control efficiency]
Monthly production rate = (DC1 charge rate + DC2 charge rate + DC3 charge rate), because the baghouse serves all three emission units.
The emission factor is the same for all the emission points, because the stack test was conducted on the baghouse exhaust.

b. For flux boxes:

(i) Overall Particulate Matter emission limits for the secondary aluminum processing unit [kg/mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{PM} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, L_{PM} = The Particulate Matter emission limit for individual unit i in the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]
T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.
n = The number of units in the secondary aluminum processing unit.

(ii) Overall HCl emission limit for the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{HCl} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, L_{HCl} = The HCl emission limit for individual unit i in the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]
T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.
n = The number of units in the secondary aluminum processing unit.

Testing Requirements:
Testing shall be conducted in accordance with 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 63 Subpart RRR.

Logan Aluminum shall conduct a performance test once per lifetime of this permit to measure emissions of HCl and PM at the outlet of the control device (baghouse). The results of the performance tests are used to establish emission rates in lbs/ton of feed/charge for PM and HCl. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation below:

$$E_{day} = \frac{\sum_{i=1}^{n} (T_i \times ER_i)}{\sum_{i=1}^{n} T_i}$$

Where, E_{day} = The daily PM or HCl emission rate for the secondary aluminum processing unit for the 24-hour period.

T_i = The total amount of feed, or aluminum produced, for emission unit I for the 24-hour period (tons).

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge)

n = The number of emission units in the secondary aluminum processing unit.

Specific Monitoring Requirements:

a. Emission capture and collection:
   - Annual inspection or all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIP standards.

b. Aluminum Output:
   - Record weight of aluminum outputs using weight measurements device or other procedure with accuracy of ± 1%; calibrate according to manufacturers specifications, or at least once every 6 months.

c. Labeling:
   - Check monthly to confirm that the diagrams in computer database are readily available.

d. Bag leak detector:
   - Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"; record voltage output from bag leak detector.

e. Reactive flux injection rate:
   - Weight measurements device accuracy of ± 1%; calibrate according to manufacturer's specifications or at least once every 6 months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test; or alternative flux injection rate determination procedure in 40 CFR Part 63 Subpart RRR section 63.1510(j)(5).

f. Lime injection rate:
   - For continuous injection systems, inspect each feed hopper or silo and record feeder at least once a day to verify that lime is free flowing; record results of each inspection. The alarm system (Triboelectric flow indicator) that notifies if the lime is not flowing shall be in good operating condition at all times.

B. Emission Unit: 02 (1005-1A&B) - DC1 Preheater and Melt Furnace (East),
Emission Unit: 03 (1005-4A&B) - DC2 Preheater and Melt Furnace (West),
Emissions Unit: 40 (1006-2) - DC3 Melt Furnace,
Emissions Unit: 55 (1111-1) – Induction Furnace and
Emissions unit: 27 (1008-1) - Reservoir Furnace:

(i) These melt furnaces, induction furnace and reservoir furnace are Group 2 furnace [40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production]

(ii) Coated scrap shall not be used in DC1 and DC2.

(iii) In addition to the requirements stated in the old permit V-97-034 (Revision2), applicable requirements from 40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production (MACT) have been incorporated. Melt and Reservoir furnace are subject to MACT.

Operating Requirements:

a. Charge/feed weight or Production weight:
- Operate a device that records the weight of each charge. Operate in accordance with operation, maintenance, and monitoring plan.

b. Labeling:
- A diagram of the unit(s) subject to 40 CFR 63 Subpart RRR has to be developed and labeled with the required information. The information will be stored in Logan Aluminum database and can be retrieved at any computer in the plant. Each workstation shall have the computer capabilities.

c. Charge and flux material:
– Use only clean charge. Use no reactive flux.

d. Aluminum output (Reservoir furnace only):
- Maintain a log that records the weight of aluminum outputs. Operate in accordance with OM&M plan.

Specific Monitoring Requirements:

a. Charge and flux materials:
– Record charge and flux material; certify every 6 months for clean charge and no reactive flux.

C. Emissions Unit: 04 (1005-2) - DC1 Hold Furnace (East),
Emissions Unit: 17 (1005-5) - DC2 Hold Furnace (West) and
Emissions Unit: 42 (1006-2) - DC3 Hold Furnace:

(i) These hold furnaces are Group 1 furnaces [40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production]
(ii) Coated scraps shall not be used in DC1 and DC2.
(iii) Total chlorine usage shall not exceed 0.49lbs per ton of aluminum produced.
(iv) In addition to the requirements stated in the old permit V-97-034 (Revision2), applicable requirements from 40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production (MACT) have been incorporated. The hold furnace is subject to MACT.

Operating Requirements:

a. Aluminum output:
- Maintain a log that records the weight of aluminum outputs. Operate in accordance with OM&M plan.

b. Labeling:
- A diagram of the unit(s) subject to 40 CFR 63 Subpart RRR has to be developed and labeled with the required information. The information will be stored in Logan Aluminum database and can be retrieved at any computer in the plant. Each workstation shall have the computer capabilities.

c. Reactive flux injection rate:
- Maintain reactive flux injection rate (lbs/hr) at or below rate used during the performance test for each furnace cycle or time period used in the performance test.

d. Site-specific monitoring plan:
- Operate furnace within the range of charge materials, contaminant levels, and parameter values established in the site-specific monitoring plan.

e. Feed material (melting/holding furnace)
- Use only clean charge.

Emission Limitations:

- Particulate emissions from the DC1/DC2 hold Furnace shall not exceed 6.0 lbs/hr and 25.053 tons/yr, as well as 0.8 lbs/ton of feed.
- Particulate emissions from the DC3 hold Furnace shall not exceed 31.33 lbs/hr and 137.23 tons/yr [401 KAR 59:010, Section 3(2)], as well as 0.8 lbs/ton of feed.
- Hydrochloric Acid (HCl) emissions shall not exceed 0.4 lbs/ton of feed.
- If the individual limits above is not met, Logan Aluminum shall meet the SAPU limit.

Compliance Demonstration:

a. Overall Particulate Matter emission limits for the secondary aluminum processing unit [kg/mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{PM} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, L_{PM} = The Particulate Matter emission limit for individual unit i in the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]

T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.

n = The number of units in the secondary aluminum processing unit.

b. Overall HCl emission limit for the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{HCl} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, L_{HCl} = The HCl emission limit for individual unit i in the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]

T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.

n = The number of units in the secondary aluminum processing unit.

Testing Requirements:

Testing shall be conducted in accordance with 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 63 Subpart RRR.

Logan Aluminum shall conduct a performance test once per lifetime of this permit to measure emissions of HCl and PM at the furnace exhaust outlet. The results of the performance tests are used to establish emission rates in lbs/ton of feed/charge for PM and HCl. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation below:

$$E_{day} = \frac{\sum_{i=1}^{n} (T_i \times ER_i)}{\sum_{i=1}^{n} T_i}$$

Where, E_{day} = The daily PM or HCl emission rate for the secondary aluminum processing unit for the 24-hour period.

T_i = The total amount of feed, or aluminum produced, for emission unit I for the 24-hour period (tons).

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge)

n = The number of emission units in the secondary aluminum processing unit.

Specific Monitoring Requirements:

a. Aluminum Output:
   - Record weight of aluminum outputs using weight measurements device or other procedure with accuracy of ± 1%; calibrate according to manufacturers specifications, or at least once every 6 months.

b. Labeling:
   - Check monthly to confirm that the diagrams in computer database are readily available.

c. Fluxing in sidewell furnace hearth:
   - Not applicable. This hold furnace has no sidewell.

d. Reactive flux injection rate:
   - Record time, weight (bag weight from manufacturer) and type of reactive flux added or injected daily while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test.

e. OM&M plan:
   - Logan Aluminum has demonstrated site-specific monitoring procedures that provide date and show correlation of emissions across the range of charge and flux materials and furnace operating parameters.

f. Feed material (melting/holding furnace):
   - Record type of permissible feed/charge material; certify charge material every 6 months.

D. Emission unit: 26 (1009-1A,B,C) - Swarf Furnace 1

(i) This swarf furnace is a Group 1 furnace [40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production]

(ii) In addition to the requirements stated in the old permit V-97-034 (Revision2), applicable requirements from 40 CFR Part 63 Subpart RRR – National Emission Standards for Hazardous Air Pollutants Secondary Aluminum Production (MACT) have been incorporated. The swarf furnace is subject to MACT.

Operating Requirements:

a. Emission capture and collection system:
   - Design and install in accordance with industrial Ventilation: A hand-book of Recommended Practice; operate in accordance with Operation, maintenance, and monitoring plan (OM&M plan).

b. Charge/feed weight or Production weight:
   - Operate a device that records the weight of each charge. Operate in accordance with OM&M plan.

c. Labeling:
   - A diagram of the unit(s) subject to 40 CFR 63 Subpart RRR has to be developed and labeled with the required information. The information will be stored in Logan Aluminum database and can be retrieved at any computer in the plant. Each workstation shall have the computer capabilities.

d. Bag leak detector:
   - Initiate corrective action with 1-hr alarm; operate such that alarm does not sound more than 5% of operating time in a 6-month period; complete corrective action in accordance with the OM&M plan.

e. Fabric Filter inlet temperature:
   - Maintain average fabric filter inlet temperature for each 3-hour period at or below average temperature during the performance test at $+14^0$C ($+25^0$F)

f. Lime injection rate:
   - Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection system; maintain feeder setting at level established during the performance test for continuous injection systems.

g. Reactive flux injection rate:
   - Maintain reactive flux injection rate (lbs/hr) at or below rate used during the performance test for each furnace cycle.

h. Maintain molten level:
   - Operate side-well furnaces such that the level of molten metal is above the top of the passage between the side-well of the furnace unless the hearth is also controlled.

i. Fluxing in side-well furnace hearth:
   - Add reactive flux only to the side-well of the furnace unless the hearth is also controlled.

Emission Limitations:

- Particulate emissions from the swarf Furnace shall not exceed 6.0 lbs/hr and 26.28 tons/yr, as well as 0.4 lbs/ton of feed.
- Hydrochloric Acid (HCl) emissions from the swarf furnace shall not exceed 0.4 lbs/ton of feed.
- Dioxin Furan (D/F) emissions from the swarf furnace shall not exceed 15.0 µg TEQ/Mg of feed.
- If the individual limits above is not met, Logan Aluminum shall meet the SAPU limit.

Compliance Demonstration:

a. Particulate emission rate in (lbs/hour) =[Monthly production rate x Emission factor from Kentucky Emission Inventory System/ (Hours of operation per month)]
The emission factor was obtained from a stack test.

b. Overall Particulate Matter emission limits for the secondary aluminum processing unit [kg/mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{PM} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, L_{PM} = The Particulate Matter emission limit for individual unit i in the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]
T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.
n = The number of units in the secondary aluminum processing unit.

c. Overall HCl emission limit for the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{HCl} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, L_{HCl} = The HCl emission limit for individual unit i in the secondary aluminum processing unit [kg/Mg (lbs/ton) of feed]
T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.
n = The number of units in the secondary aluminum processing unit.

d. The overall D/F emission limit for the secondary aluminum processing unit [µg TEQ/Mg (lbs/ton) of feed]

$$= \frac{\sum_{i=1}^{n} (L_{D/F} \times T_i)}{\sum_{i}^{n} (T_i)}$$

Where, $L_{D/F}$ = The D/F emission limit for individual unit i [µg TEQ/Mg

(lbs/ton) of feed]

T_i = The feed rate for individual emission unit I in the secondary aluminum processing unit.

n = The number of units in the secondary aluminum processing unit.

Testing Requirements:

Testing shall be conducted in accordance with 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 63 Subpart RRR.

Logan Aluminum shall conduct a performance test by year 2007 to measure emissions of PM and D/F at the outlet of the control device and emissions of HCl at the outlet. The results of the performance tests are used to establish emission rates in lbs/ton of feed/charge for PM and HCl and µg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation below:

$$E_{day} = \frac{\sum_{i=1}^{n} (T_i \times ER_i)}{\sum_{i=1}^{n} T_i}$$

Where, E_{day} = The daily PM, HCl or D/F emission rate for the secondary aluminum processing unit for the 24-hour period.

T_i = The total amount of feed, or aluminum produced, for emission unit I for the 24-hour period (tons).

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton of feed/charge or µg/Mg of feed/charge)

n = The number of emission units in the secondary aluminum processing unit.

Specific Monitoring Requirements:

a. Emission capture and collection:
   - Annual inspection or all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIP standards.

b. Feed/charge weight:
   - Record weight of each feed/charge, weight measurements device or other procedure with accuracy of ± 1%; calibrate according to manufacturers specifications, or at least once every 6 months.

c. Labeling:
   - Check monthly to confirm that the diagrams in computer database are readily available.

d. Bag leak detector:
   - Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"; record voltage output from bag leak detector.

e. Reactive flux injection rate:
- Weight measurements device accuracy of ± 1%; calibrate according to manufacturer's specifications or at least once every 6 months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test.

f. Lime injection rate:
- For continuous injection systems, inspect each feed hopper or silo and record feeder at least once a day to verify that lime is free flowing; record results of each inspection. The alarm system (Triboelectric flow indicator) that notifies if the lime is not flowing shall be in good operating condition at all times.

g. Fabric filter inlet temperature:
- Continuous measurement device to meet specifications in 40 CFR Part 63 Subpart RRR section 63.1510(h)(2); record temperatures in 15-minute block averages; determine and record 3-hr block averages.

h. Maintain molten aluminum level in side-well furnace:
- Maintain aluminum level using radar for operating log; certify every 6 months.

E. Emissions unit: 10 (3005-1) - Cold Mill 1

(i) Total aluminum throughput will increase from 311,000 lbs/hr to 366,667 lbs/hr.

(ii) Particulate Matter emissions limitation will increase from 38.81 lbs/hr and 159.88 tons/yr to 39.84 lbs/hr and 164.12 tons/yr respectively [401 KAR 59:010, Section 3(2)].

(iii) Particulate Matter emissions will increase from 16.34 tons/yr (actual and controlled) to 22.65 tons/yr (actual and controlled).

(iv) The language "Records of the dates and duration when carbon adsorption unit is generated" was omitted in the permit renewal because the carbon adsorption unit regenerates continuously.

F. Emissions unit: 14 (3010-1) - Cold Mill 2

(i) Total aluminum throughput will increase from 131,800 lbs/hr to 134,233 lbs/hr.

(ii) Particulate Matter emissions limitation will increase from 33.83 lbs/hr and 145.97

tons/yr to 33.93 lbs/hr and 140.57 tons/yr respectively [401 KAR 59:010, Section 3(2)].

(iii) Particulate Matter emissions will increase from 15.27 tons/yr (actual and controlled) to 19.60 tons/yr (actual and controlled).

(iv) The language "Records of the dates and duration when carbon adsorption unit is generated" was omitted in the permit renewal because the carbon adsorption unit regenerates continuously.

G. Emission Unit: 54(4021-B) - Boiler 4

(i) This is a new emission point

(ii) Boiler #4 will be used to provide plant steam.

(iii) Control Equipment = Soot Blower and Baghouse (99% control efficiency).

(iv) Applicable Regulation = 401 KAR 59:015, New indirect heat exchangers, is applicable to each affected facility with a capacity of 250 mmBTU/hr heat input or less which commenced construction on or after April 9, 1972. The boiler is subject to Sections 4(1)(c), 4(2), and 5(1).

(v) Emission factor obtained from AP-42

(vi) Primary fuel = Waste oil (Fuel oil #2), and secondary fuel = Natural Gas and Propane.

Emission Limitations:

a. Particulate Matter:

- Particulate emissions from Boiler #4 shall not exceed 0.378 lbs/mmBTU (20.03 lbs/hr).

b. Sulfur dioxide emissions from Boiler 4 shall not exceed 39 tons per 12 month rolling average to preclude 401KAR51:017, Prevention of Significant Deterioration.

(i) Sulfur dioxide emission rate (tons/yr) = [waste oil usage (gallons/yr) x AP-42 emission factor (lbs/1000 gal)] / 2000 (lbs/ton)
or

(ii) From stack test results.

c. Visible emissions shall not exceed 20% opacity except the opacity shall not exceed 40% for more than six minutes of any 60 minutes during cleaning the firebox or blowing soot and except during building new fire [401 KAR 59:015, Section 4(2)].

Operating Limitations:

a. Total annual waste oil usage for Boiler #4 shall not exceed 3.75 Mega gallons.

b. Total annual natural gas usage rate for Boiler #4 shall not exceed 455 mmcf/yr.
Compliance with the annual waste oil and natural usage shall be monitored as rolling 12-month totals. If a natural gas flow meter malfunctions, the Logan Aluminum shall utilize average daily natural gas usage as an acceptable estimate.

c. Propane shall not be used as a back up fuel for more than 1500 hrs/yr based on a 12 month rolling total.
To show compliance with the propane operating limitation, Logan Aluminum shall keep records of the total hours of operation each month propane is being used and ensure the total hours of operation remain below 1500 hrs during any rolling 12 month

period.

Specific Monitoring Requirements:

a. Logan Aluminum shall conduct an analysis of the sulfur content of the waste oil on a monthly basis.
b. Logan Aluminum shall monitor visible emissions on a weekly basis using EPA Reference Method 9 and maintain records for two years.

H. Emission Unit: 55(1111-1) - Induction Furnace

(i) This is a new emission point.
(ii) This induction furnace will be separated from emission point 22(1001-1).
(iii) Control equipment = Soot blower and Baghouse (99% control efficiency)
(iv) Emission limitations, operating limitations, monitoring requirements, recordkeeping requirements, reporting requirements, testing requirements, control equipment requirements, and certification requirements remain unchanged as it is in old permit V-97-034 (Revision2).

I. Emission Unit: 44(1003-1) – Chlorine Building

- It is an insignificant activity.

J. Emission Unit: 46(4021-5) – Propane Flare

- Specific Monitoring Requirements have been changed to:
  Logan Aluminum shall monitor visible emissions on a monthly basis using EPA Reference Method 9 when the flare is in operation. If flare is not in operation, note in log that it is not in use.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.